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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/888,243	06/22/2001	H. Robert Horvitz	01997/211003	9113
21559	7590	10/03/2003	EXAMINER	
CLARK & ELBING LLP 101 FEDERAL STREET BOSTON, MA 02110			BUGAISKY, GABRIELE E	
			ART UNIT	PAPER NUMBER
			1653	

DATE MAILED: 10/03/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/888,243

Applicant(s)

HORVITZ ET AL.

Examiner

Gabriele E. BUGAISKY

Art Unit

1653

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4,6-9,11-16,18 and 19 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☐ Claim(s) ____ is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☒ Claim(s) 1-4, 6-9,11-16, 18-19 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

Election/Restrictions

The inventions are distinct, each from the other because of the following reasons:

- I. Claims 1-4, drawn to Ice homologs with a substitution corresponding to one at amino acid position 65 of either SEQ ID NO:4 or 30, classified in class 435, subclass 226.
- II. Claims 1-4, drawn to Ice homologs with a substitution corresponding to one at amino acid position 287 of either SEQ ID NO:4 or 30, classified in class 435, subclass 226.
- III. Claims 1-4, drawn to Ice homologs with a substitution or truncation corresponding to one at amino acid position 323 of either SEQ ID NO:4 or 30, classified in class 435, subclass 226.
- IV. Claims 1-4, drawn to Ice homologs with a substitution or truncation corresponding to one at amino acid position 339 of either SEQ ID NO:4 or 30, classified in class 435, subclass 226.
- V. Claims 1-4, drawn to Ice homologs with a substitution corresponding to one at amino acid position 361 of either SEQ ID NO:4 or 30, classified in class 435, subclass 226.
- VII. Claims 1-4, drawn to Ice homologs with a substitution corresponding to one at amino acid position 390 of either SEQ ID NO:4 or 30, classified in class 435, subclass 226.

- VIII. Claims 1-4, drawn to Ice homologs with a substitution corresponding to one at amino acid position 393 of either SEQ ID NO:4 or 30, classified in class 435, subclass 226.
- IX. Claims 6-7, drawn to a homolog of SEQ ID NO: 2 or 29, having a deletion of aa150-503, classified in class 435, subclass 226.
- X. Claims 6-7, drawn to a homolog of SEQ ID NO: 2 or 29, having a deletion of aa-373-503, classified in class 435, subclass 226.
- XI. Claims 6-7, drawn to a homolog of SEQ ID NO: 2 or 29, having a deletion of aa150-372, classified in class 435, subclass 226.
- XII. Claim 9, drawn to a homolog of SEQ ID NO:28, with a substitution at aa 397, classified in class 435, subclass 226.
- XIII. Claims 10-11, drawn to a homolog of SEQ ID NO:28, with a substitution at aa 319, classified in class 435, subclass 226.
- XIV. Claims 12 and 18, drawn to Ice homologs with a substitution corresponding to one at amino acid position 183 of SEQ ID NO:2 or amino acid position 126 of SEQ ID NO: 4, and a treatment method of use, classified in class 424, subclass 94.65.
- XV. Claims 12 and 18 drawn to Ice homologs with a substitution corresponding to one at amino acid position 234 of SEQ ID NO:2, and a treatment method of use, classified in class 424, subclass 94.65.

- XVI Claims 12 and 18, drawn to Ice homologs with a substitution corresponding to one at amino acid position 242 of SEQ ID NO:1, and a treatment method of use, classified in class 424, subclass 94.65.
- XVII Claims 12 and 18, drawn to Ice homologs with a substitution corresponding to one at amino acid position 246 of SEQ ID NO:2 or amino acid position 166 of SEQ ID NO: 4, and a treatment method of use, classified in class 424, subclass 94.65.
- XVIII Claims 12 and 18 drawn to Ice homologs with a substitution corresponding to one at amino acid position 247 of SEQ ID NO:2 or amino acid position 167 of SEQ ID NO: 4, and a treatment method of use, classified in class 424, subclass 94.65.
- XIX Claims 12 and 18, drawn to Ice homologs with a substitution corresponding to one at amino acid position 248 of SEQ ID NO:2 or amino acid position 168 of SEQ ID NO: 4, and a treatment method of use, classified in class 424, subclass 94.65.
- 20 Claims 12 and 18, drawn to Ice homologs with a substitution corresponding to one at amino acid position 250 of SEQ ID NO:2 or amino acid position 170 of SEQ ID NO: 4, and a treatment method of use, classified in class 424, subclass 94.65.
- 21 Claims 12 and 18, drawn to Ice homologs with a substitution corresponding to one at amino acid position 253 of SEQ ID NO:2 or amino acid position 173 of SEQ ID NO: 4, and a treatment method of use, classified in class 424, subclass 94.65.

22. Claims 12 and 18, drawn to Ice homologs with a substitution corresponding to one at amino acid position 259 of SEQ ID NO:2 or amino acid position 179 of SEQ ID NO: 4, and a treatment method of use, classified in class 424, subclass 94.65.
23. Claims 12 and 18, drawn to Ice homologs with a substitution corresponding to one at amino acid position 261 of SEQ ID NO:2 or amino acid position 181 of SEQ ID NO: 4, and a treatment method of use, classified in class 424, subclass 94.65.
24. Claims 12 and 18, drawn to Ice homologs with a substitution corresponding to one at amino acid position 265 of SEQ ID NO:2 or amino acid position 185 of SEQ ID NO: 4, and a treatment method of use, classified in class 424, subclass 94.65.
25. Claims 12 and 18, drawn to Ice homologs with a substitution corresponding to one at amino acid position 277 of SEQ ID NO:2 or amino acid position 197 of SEQ ID NO: 4, and a treatment method of use, classified in class 424, subclass 94.65.
26. Claims 12 and 18, drawn to Ice homologs with a substitution corresponding to one at amino acid position 278 of SEQ ID NO:2 or amino acid position 198 of SEQ ID NO: 4, and a treatment method of use, classified in class 424, subclass 94.65.
27. Claims 12 and 18, drawn to Ice homologs with a substitution corresponding to one at amino acid position 280 of SEQ ID NO:2 or amino acid position 200 of

- SEQ ID NO: 4, and a treatment method of use, classified in class 424, subclass 94.65.
28. Claims 12 and 18, drawn to Ice homologs with a substitution corresponding to one at amino acid position 283 of SEQ ID NO:2 or amino acid position 203 of SEQ ID NO: 4, and a treatment method of use, classified in class 424, subclass 94.65.
29. Claims 12 and 18, drawn to Ice homologs with a substitution corresponding to one at amino acid position 285 of SEQ ID NO:2 or amino acid position 205 of SEQ ID NO: 4, and a treatment method of use, classified in class 424, subclass 94.65.
30. Claim 12, drawn to Ice homologs with a substitution corresponding to one at amino acid position 286 of SEQ ID NO:2 or amino acid position 206 of SEQ ID NO: 4, and a treatment method of use, classified in class 424, subclass 94.65.
31. Claims 12 and 18, drawn to Ice homologs with a substitution corresponding to one at amino acid position 287 of SEQ ID NO:2 or amino acid position 207 of SEQ ID NO: 4, and a treatment method of use, classified in class 424, subclass 94.65.
32. Claims 12 and 18, drawn to Ice homologs with a substitution corresponding to one at amino acid position 291 of SEQ ID NO:2 or amino acid position 211 of SEQ ID NO: 4, and a treatment method of use, classified in class 424, subclass 94.65.

- 33 Claims 12 and 18, drawn to Ice homologs with a substitution corresponding to one at amino acid position 298 of SEQ ID NO:2 or amino acid position 218 of SEQ ID NO: 4, and a treatment method of use, classified in class 424, subclass 94.65.
- 34 Claims 12 and 18, drawn to Ice homologs with a substitution corresponding to one at amino acid position 304 of SEQ ID NO:2 or amino acid position 244 (SIC???) of SEQ ID NO: 4, and a treatment method of use, classified in class 24, subclass 94.65.
- 35 Claims 12 and 18, drawn to Ice homologs with a substitution corresponding to one at amino acid position 306 of SEQ ID NO:2 or amino acid position 228 of SEQ ID NO: 4, and a treatment method of use, classified in class 424, subclass 94.65.
- 36 Claims 12 and 18, drawn to Ice homologs with a substitution corresponding to one at amino acid position 307 of SEQ ID NO:2 or amino acid position 229 of SEQ ID NO: 4, and a treatment method of use, classified in class 424, subclass 94.65.
- 37 Claims 12 and 18, drawn to Ice homologs with a substitution corresponding to one at amino acid position 310 of SEQ ID NO:2 or amino acid position 232 of SEQ ID NO: 4, and a treatment method of use, classified in class 424, subclass 94.65.
- 38 Claims 12 and 18, drawn to Ice homologs with a substitution corresponding to one at amino acid position 311 of SEQ ID NO:2 or amino acid position 233 of

SEQ ID NO: 4, and a treatment method of use, classified in class 424, subclass 94.65.

- 39 Claims 12 and 18, drawn to Ice homologs with a substitution corresponding to one at amino acid position 314 of SEQ ID NO:2 or amino acid position 236 of SEQ ID NO: 4, and a treatment method of use, classified in class 424, subclass 94.65.
- 40 Claims 12 and 18, drawn to Ice homologs with a substitution corresponding to one at amino acid position 315 of SEQ ID NO:2 or amino acid position 237 of SEQ ID NO: 4, and a treatment method of use, classified in class 424, subclass 94.65.
- 41 Claims 12 and 18, drawn to Ice homologs with a substitution corresponding to one at amino acid position 316 of SEQ ID NO:2 or amino acid position 238 of SEQ ID NO: 4, and a treatment method of use, classified in class 424, subclass 94.65.
- 42 Claims 12 and 18, drawn to Ice homologs with a substitution corresponding to one at amino acid position 321 of SEQ ID NO:2 or amino acid position 243 of SEQ ID NO: 4, and a treatment method of use, classified in class 424, subclass 94.65.
- 43 Claims 12 and 18, drawn to Ice homologs with a substitution corresponding to one at amino acid position 323 of SEQ ID NO:2 or amino acid position 245 of SEQ ID NO: 4, and a treatment method of use, classified in class 424, subclass 94.65.

- 44 Claims 12 and 18, drawn to Ice homologs with a substitution corresponding to one at amino acid position 334 of SEQ ID NO:2 or amino acid position 261 of SEQ ID NO: 4, and a treatment method of use, classified in class 424, subclass 94.65.
- 45 Claims 12 and 18, drawn to Ice homologs with a substitution corresponding to one at amino acid position 339 of SEQ ID NO:2 or amino acid position 226 (SIC???) of SEQ ID NO: 4, and a treatment method of use, classified in class 424, subclass 94.65.
- 46 Claims 12 and 18, drawn to Ice homologs with a substitution corresponding to one at amino acid position 344 of SEQ ID NO:2 or amino acid position 271 of SEQ ID NO: 4, and a treatment method of use, classified in class 424, subclass 94.65.
- 47 Claims 12 and 18, drawn to Ice homologs with a substitution corresponding to one at amino acid position 346 of SEQ ID NO:2 or amino acid position 273 of SEQ ID NO: 4, and a treatment method of use, classified in class 424, subclass 94.65.
- 48 Claims 12 and 18, drawn to Ice homologs with a substitution corresponding to one at amino acid position 349 of SEQ ID NO:2 or amino acid position 276 of SEQ ID NO: 4, and a treatment method of use, classified in class 424, subclass 94.65.
- 49 Claims 12 and 18, drawn to Ice homologs with a substitution corresponding to one at amino acid position 350 of SEQ ID NO:2 or amino acid position 277 of

SEQ ID NO: 4, and a treatment method of use, classified in class 424, subclass 94.65.

- 50 Claims 12 and 18, drawn to Ice homologs with a substitution corresponding to one at amino acid position 351 of SEQ ID NO:2 or amino acid position 278 of SEQ ID NO: 4, and a treatment method of use, classified in class 424, subclass 94.65.
- 51 Claims 12 and 18, drawn to Ice homologs with a substitution corresponding to one at amino acid position 356 of SEQ ID NO:2 or amino acid position 283 of SEQ ID NO: 4, or amino acid position 323 of SEQ ID NO:28 ,and a treatment method of use, classified in class 424, subclass 94.65.
- 52 Claims 12 and 18, drawn to Ice homologs with a substitution corresponding to one at amino acid position 357 of SEQ ID NO:2 or amino acid position 284 of SEQ ID NO: 4, or amino acid position 324 of SEQ ID NO:28 and a treatment method of use, classified in class 424, subclass 94.65.
- 53 Claims 12 and 18, drawn to Ice homologs with a substitution corresponding to one at amino acid position 358 of SEQ ID NO:2 or amino acid position 285 of SEQ ID NO: 4, and a treatment method of use, classified in class 424, subclass 94.65.
- 54 Claims 12 and 18, drawn to Ice homologs with a substitution corresponding to one at amino acid position 359 of SEQ ID NO:2 or amino acid position 286 of SEQ ID NO: 4, or amino acid position 326 of SEQ ID NO:28 and a treatment method of use, classified in class 424, subclass 94.65.

- 55 Claims 12 and 18, drawn to Ice homologs with a substitution corresponding to one at amino acid position 359 of SEQ ID NO:2 or amino acid position 286 of SEQ ID NO: 4, or amino acid position 326 of SEQ ID NO:28 and a treatment method of use, classified in class 424, subclass 94.65.
- 56 Claims 12 and 18, drawn to Ice homologs with a substitution corresponding to one at amino acid position 360 of SEQ ID NO:2 or amino acid position 287 of SEQ ID NO: 4, or amino acid position 327 of SEQ ID NO:28 , and a treatment method of use, classified in class 424, subclass 94.65.
- 57 Claims 12 and 18, drawn to Ice homologs with a substitution corresponding to one at amino acid position 371 of SEQ ID NO:2 or amino acid position 297 of SEQ ID NO: 4, and a treatment method of use, classified in class 424, subclass 94.65.
- 58 Claims 12 and 18, drawn to Ice homologs with a substitution corresponding to one at amino acid position 414 of SEQ ID NO:2 or amino acid position 326 of SEQ ID NO: 4, or amino acid position 362 of SEQ ID NO:28, and a treatment method of use, classified in class 424, subclass 94.65.
- 59 Claims 12 and 18, drawn to Ice homologs with a substitution corresponding to one at amino acid position 429 of SEQ ID NO:2 or amino acid position 341 of SEQ ID NO: 4, or amino acid position 377 of SEQ ID NO:28, and a treatment method of use, classified in class 424, subclass 94.65.
- 60 Claims 12 and 18, drawn to Ice homologs with a substitution corresponding to one at amino acid position 434 of SEQ ID NO:2 or amino acid position 346 of

SEQ ID NO: 4, or amino acid position 382 of SEQ ID NO:28, and a treatment method of use, classified in class 424, subclass 94.65.

- 61 Claims 12 and 18, drawn to Ice homologs with a substitution corresponding to one at amino acid position 435 of SEQ ID NO:2 or amino acid position 347 of SEQ ID NO: 4, or amino acid position 383 of SEQ ID NO:28 , and a treatment method of use, classified in class 424, subclass 94.65.
- 62 Claims 12 and 18, drawn to Ice homologs with a substitution corresponding to one at amino acid position 438 of SEQ ID NO:2 or amino acid position 350 of SEQ ID NO: 4, or amino acid position 386 of SEQ ID NO:28, and a treatment method of use, classified in class 424, subclass 94.65.
- 63 Claims 12 and 18, drawn to Ice homologs with a substitution corresponding to one at amino acid position 449 of SEQ ID NO:2 or amino acid position 361 of SEQ ID NO: 4, or amino acid position 388 of SEQ ID NO:28 and a treatment method of use, classified in class 424, subclass 94.65.
- 64 Claims 12 and 18, drawn to Ice homologs with a substitution corresponding to one at amino acid position 454 of SEQ ID NO:2 or amino acid position 366 of SEQ ID NO: 4, or amino acid position 402 of SEQ ID NO:28 and a treatment method of use, classified in class 424, subclass 94.65.
65. Claims 12 and 18, drawn to Ice homologs with a substitution corresponding to one at amino acid position 488 of SEQ ID NO:2 or amino acid position 394 of SEQ ID NO: 4, or amino acid position 438 of SEQ ID NO:28 and a treatment method of use, classified in class 424, subclass 94.65.

66. Claims 12 and 18, drawn to Ice homologs with a substitution corresponding to one at amino acid position 493 of SEQ ID NO:2 or amino acid position 399 of SEQ ID NO: 4, or amino acid position 443 of SEQ ID NO:28 and a treatment method of use, classified in class 424, subclass 94.65.
67. Claims 12 and 18, drawn to Ice homologs with a substitution corresponding to one at amino acid position 496 of SEQ ID NO:2 or amino acid position 402 of SEQ ID NO: 4, or amino acid position 446 of SEQ ID NO:28 and a treatment method of use, classified in class 424, subclass 94.65.
68. Claims 13-16 and 19, drawn to Ice homologs with a substitution corresponding to one at amino acid position 358 of SEQ ID NO:2 or amino acid position 285 of SEQ ID NO: 4, or amino acid position 319 of SEQ ID NO:28 and a treatment method of use, classified in class 424, subclass 94.65.

This application contains claims directed to the following patentably distinct compounds, (which have different primary structures) of the claimed invention: the specific substituted and/or truncated proteins of groups 1-68. Applicant is required under 35 U.S.C. 121 to elect a single disclosed compound for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable. Applicant is advised that a reply to this requirement must include an identification of the protein that is elected consonant with this requirement, and a listing of all claims readable thereon, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.

This election requirement is not be construed as a species election, as these compounds do not share a common primary structure and appear to be patentably distinct.

Should applicant traverse on the ground that these different compounds are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

Applicant is advised that the reply to this requirement to be complete must include an election of the invention to be examined even though the requirement be traversed (37 CFR 1.143).

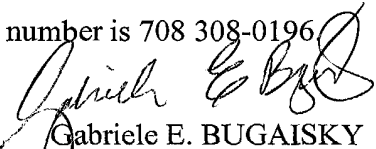
Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a petition under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gabriele E. BUGAISKY whose telephone number is (703)308-4201. The examiner can normally be reached on Tu & Th 8:15 AM- 2 PM; We. & Fr 8:15 AM- 1:30 PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christopher SF Low can be reached on (703) 308-2923. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9306 for regular communications and 703-872-9306 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 708 308-0196.


Gabriele E. BUGAISKY
Primary Examiner
Art Unit 1653

October 1, 2003